

FORM PTO-1449
(REV. 7-80)U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO.

SERIAL NO.

MPI 8311

09/580,007

INFORMATION DISCLOSURE STATEMENT
BY APPLICANT(S)

(Use several sheets if necessary)

APPLICANT

Ornberg et al.

FILING DATE
May 26, 2000

GROUP

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	RECEIVED FILING DATE APPROPRIATE
DI	1	4,514,589	04/30/85	Aldinger et al.	174	119R	SEP 27 2000
	2	4,718,908	01/12/88	Wigginton et al.	623	16	GROUP 1700
	3	4,775,426	10/04/88	Murley et al.	148	2	
	4	5,013,323	05/07/91	Kobayashi et al.	623	16	
	5	5,397,362	03/14/95	Noda	623	16	
	6	5,403,834	04/04/95	Malfroy-Camine et al.	514	185	
	7	5,610,293	03/11/97	Riley et al.	540	474	
	8	5,626,861	05/06/97	Laurencin et al.	424	426	
	9	5,626,863	05/06/97	Hubbell et al.	424	426	
	10	5,637,578	06/10/97	Riley et al.	514	186	
	11	5,665,428	09/09/97	Cha et al.	427	213.3	
	12	5,696,109	12/09/97	Malfroy-Camine et al.	514	185	
	13	5,711,763	01/27/98	Nonami et al.	623	16	
	14	5,749,839	05/12/98	Kovacs	601	153	
	15	5,766,618	06/16/98	Laurencin et al.	424	426	
	16	5,800,456	09/01/98	Maeda et al.	606	198	
	17	5,817,303	10/06/98	Stedronski et al.	424	78.02	
	18	5,824,047	10/20/98	Moreland	623	1	
	19	5,827,880	10/27/98	Malfroy-Camine et al.	514	492	
	20	5,830,539	11/03/98	Yan et al.	427	551	
	21	5,834,509	11/10/98	Malfroy-Camine et al.	514	492	
	22	5,836,313	11/17/98	Perez et al.	128	898	
DI	23	5,840,319	11/24/98	Alakhov et al.	424	400	

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David Jockell

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01	24	5,851,227	12/22/98	Spehr	607	126	
	25	5,861,032	01/19/99	Subramaniam	623	11	
	26	5,869,103	02/09/99	Yeh et al.	424	501	
	27	5,871,535	02/16/99	Wolff et al.	623		
	28	5,873,904	02/23/99	Ragheb et al.	623	1	
	29	5,874,421	02/23/99	Riley et al.	514	161	
	30	5,876,433	03/02/99	Lunn	623	1	
	31	5,876,452	03/02/99	Athanasios et al.	623	16	
	32	5,877,263	03/02/99	Patnaik et al.	525	453	
	33	5,879,359	03/09/99	Dorigatti et al.	606	152	
	34	5,879,697	03/09/99	Ding et al.	424	422	
	35	5,885,609	03/23/99	Amiji	424	425	
	36	5,889,130	03/30/99	Worley et al.	526	261	
01	37	5,891,862	04/06/99	Mandeville, III et al.	514	54	

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FOREIGN PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
01	38	WO 93/11800	06/93	PCT				
	39	WO 93/14093	07/93	PCT				
	40	CN108806A (Abstract)	06/94	China				
	41	WO 95/28968	11/95	PCT				
	42	WO 96/39396	12/96	PCT				
01	43	WO 96/40658	12/96	PCT				


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				FILING DATE May 26, 2000	GROUP



FOREIGN PATENT DOCUMENTS						
01	44	0 679,155 B1	08/97	EPO		<div style="font-size: 2em; font-weight: bold;">RECEIVED</div> <div style="font-size: 1.5em;">SEP 27 2000</div> <div style="font-size: 2em; font-weight: bold;">GROUP 1700</div>
	45	0 598,753 B1	03/98	EPO		
01	46	WO 98/58636	12/98	PCT		

OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)		
01	47	Alexander, et al., "Manganese(II) Complexes of a Macrocyclic Ligand," 1970, (Inorganic Nuclear Chemistry Letters, Vol. 6), pp. 445-448
	48	Richman, et al., "Nitrogen Analogs of Crown Ethers," April 3, 1974, (Journal of the American Chemical Society, Vol. 96), p. 7
	49	Brady, et al., "Practical Synthesis of Cyclic Peptides, with an Example of Dependence of Cyclization Yield Upon Linear Sequence," 1979, (Journal of Organic Chemistry, Vol. 44, No. 18), pp. 3101-3105
	50	Kimura, et al., "Superoxide Dismutase Activity of Macrocyclic Polyamine Complexes," 1981 (Biochimica et Biophysica Acta, Vol. 678), pp. 172-179
	51	Gryglewski, et al., "Superoxide Anion is Involved in the Breakdown of Endothelium-Derived Vascular Relaxing Factor," April 1986, (Nature, Vol. 320), pp. 454-456
	52	Bannister, et al., "Aspects of the Structure, Function, and Applications of Superoxide Dismutase," 1987, (CRC Critical Reviews in Biochemistry, Vol. 22, Issue 2), pp. 111-180
	53	Newton, et al., "Synthesis and Characterization of the Mn(II) Complex of [15]aneN ₅ ," 1988, (J. Coord. Chem, Vol. 19), pp. 265-277
	54	Cremer, et al., "Oxygen Free Radical Scavengers to Prevent Pulmonary Reperfusion Injury After Heart-Lung Transplantation," July/August 1989, (The Journal of Heart Transplantation, Vol. 8, No. 4), pp. 330-336
	55	Bradshaw, et al., "A Simple Crab-Like Cyclization Procedure to Prepare Polyaza-Crowns and Cyclams with One or Two Unsubstituted Macroring Nitrogen Atoms or with a Hydroxy Group," September/October 1989, (J. Heterocyclic Chem., Vol. 26), pp. 1431-1435
	56	Lindoy, L.F., "The Chemistry of Macrocyclic Ligand Complexes," 1989 (The Press Syndicate of the University of Cambridge), pp. 16, 40 and 42
01	57	Ferrari, et al., "Superoxide Dismutase: Possible Therapeutic Use in Cardiovascular Disease," 1989, (Pharmalogical Research, Vol. 21, Supplement 2), pp. 57-65

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<div style="transform: rotate(-15deg);"> RECEIVED SEP 27 2000 GROUP 1700 </div>					
OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)					
2	58	Krakowiak, et al., "Preparation of Triaza-, Tetraaza- and Peraza-Crown Compounds Containing Aromatic Side Groups or Unsubstituted Ring Nitrogen Atoms," 1990, (J. Org. Chem., Vol. 55, No. 10), pp. 3364-3368			
	59	Riley, et al., "Stopped-Flow Kinetic Analysis for Monitoring Superoxide Decay in Aqueous Systems," 1991, (Analytical Biochemistry, Vol. 196), pp. 344-349			
	60	Weiss, et al., "Catalytic Efficacies of Agents that Dismutate Superoxide," 1991, (J. Cell. Biochem., Supplement 15C), p. 216			
	61	Aston, et al., "Asymmetric Synthesis of Highly Functionalized Polyazamacrocycles via Reduction of Cyclic Peptide Precursors," 1994, (Tetrahedron Letters, Vol. 35, No. 22), pp. 3687-3690			
	62	Lin, et al., "Use of Superoxide Dismutase (SOD) in Patients with Temporomandibular Joint Dysfunction - a Preliminary Study," 1994, (International Journal of Oral Maxillofacial Surgery, Vol. 23), pp. 428-429			
	63	Hardy, et al., "Superoxide Dismutase Mimetics Inhibit Neutrophil-Mediated Human Aortic Endothelial Cell Injury <i>in Vitro</i> ," 1994, (The Journal of Biological Chemistry, Vol. 269, No. 28), pp. 18535-18540			
	64	Bulkley, G.B., "Reactive Oxygen Metabolites and Reperfusion Injury: Aberrant Triggering of Reticuloendothelial Function," October 1994, (The Lancet, Vol. 344), pp. 934-936			
	65	Babior, B.M., "Superoxide: a Two-Edged Sword," 1997, (Brazilian Journal of Medical and Biological Research, Vol 30), pp. 141-155			
	66	Weiss et al., "Manganese-Based Superoxide Dismutase Mimics: Design, Discovery and Pharmacologic Efficacies", In The Oxygen Paradox, 1995 (CLEUP Univeristy Press, Padova, Italy), pp. 641-651			
	67	Weiss et al., "Manganese-Based Superoxide Dismutase Mimetics Inhibit Neutrophil Infiltration <i>In Vivo</i> ", 1996, (J. Biol., Chem., Vol. 271) , pp. 26149-26156			
	68	Kasten et al., "Potentiation of Nitric Oxide Mediated Vascular Relaxation by SC-52608, A Superoxide Dismutase Mimic", 1995 (Proc. Soc. Exp. Biol. Med., Vol. 208), pp. 170-177			
	69	Hardy et al., "Superoxide Dismutase Mimetics Inhibit Neutrophil-Mediated Human Aortic Endothelial Cell Injury <i>In Vitro</i> ", 1997, (J. Biol. Chem., Vol. 269), pp. 18535-18540			
	70	Kilgore et al., "Protective Effects of the SOD-Mimetic SC-52608 Against Ischemia/Reperfusion Damage in the Rabbit Isolated Heart", 1994, (J. Mol. Cell. Cardiol., Vol 26), pp. 995-1006			
	71	Black et al., "Inhibition of <i>In Vivo</i> Myocardial Ischemia and Eperfusion Injury by a Synthetic Manganese-Based Superoxide Dismutase Mimetic", 1994, (J. Pharmacol. Exp. Therapeut., Vol. 270) pp. 1208-1215			
92	72	Venturini et. al., "A Manganese Based Superoxide Dismutase Mimic Protects Feline Myocardium fro Necrosis after Ischemia and Reperfusion", In The Biology of Nitric Oxide, 1994, (Portland, Press, London) p. 65-9			

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73	Riley et al., "Computer-Aided Design (CAD) of Synzymes: Use of Molecular Mechanics (MM) for the Rational Design of Superoxide Dismutase Mimics", 1999, (Inorg. Chem., Vol. 38), pp. 1908-1917				
74	Michelson, A.M., In Handbook of Methods for Oxygen Radical Research, 1989, (Greenwald, R.A. Ed.; CRC:Boca Raton), p. 71-75				
75	Park, K.D., "Synthesis and Characterization of SPUU-PEO-Heparin Graft Copolymers", 1991, (J. Polymer. Sci., Vol. 20)pp. 1725-37				
76	Ross et al., "The Effect of HA, TCP and Alcap Bioceramic Capsules on the Viability of Human Monocyte and Monocyte Derived Macrophages", 1996, (Bio. Sci. Inst., Vol. 32), pp. 71-79				
77	Shanbhag et al., "Decreased Neutrophil Respiratory Burst on Exposure to Cobalt-Chrome Alloy and Polystyrene <i>In Vitro</i> ", 1992, (Jour. Bio. Mat. Res.), pp. 185-195				
78	Siggia et al., "Quantitative Organic Analysis Via Functional Groups, 4th Edition, (John Wiley and Sons) pp. 169-172				
79	Gristina, A.G., "Implant Failure and the Immuno-Incompetent Fibro-Inflammatory Zone", (Clinical Orthopaedics and Related Research, Vol. 298), pp. 106-118				
80	Kaplan et al., "Biomaterial-Induced Alterations of Neutrophil Superoxide Production", 1992, (Jour. Bio. Mat. Res., Vol. 26), pp. 1039-51				
81	Moore et al., "A Comparison of the Inflammatory Potential of Particulates Derived from Two Composite Materials", 1997, (Jour. Bio. Mat. Res., Vol. 34), pp. 137-147				
82	Ross et al., "The Effect of HA, TCP and ALCAP Bioceramic Capsules on the Viability of Human Monocyte and Monocyte Derived Macrophages", 1996, (Bio. Sci. Inst., Vol. 32) pp. 71-79				
83	Shanbhag et al., "Decreased Neutrophil Respiratory Burst on Exposure to Cobalt-Chrome Alloy and Polystyrene <i>In Vitro</i> ", 1992, (Jour. Bio. Mat. Res., Vol. 26), pp. 185-195				
84	Borowiec et al., "Biomaterial-Dependent Blood Activation During Simulated Extracorporeal Circulation: A Study of Heparin-Coated and Uncoated Circuits", 1997, (Thorac. Cardiovasc. Surgeon, Vol. 45), pp. 295-301				
85	Weiss et al., "Manganese(II)-Based Superoxide Dismutase Mimetics: Rational Drug Design of Artificial Enzymes", 1996, (Drugs of the Future, Vol. 21), pp. 383-389				
86	Riley et al., "Rational Design of Synthetic Enzymes and Their Potential Utility as Human Pharmaceuticals: Development of Manganese(II)-Based Superoxide Dismutase Mimics", 1997, (Cat. Tech. I) p. 41-49				

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